UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/347,438	07/02/1999	SHAI MOHABAN	50325-074	3850

29989   7590   01/12/2005

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EXAMINER
BURGESS, BARBARA N

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/347,438	MOHABAN ET AL.
	Examiner	Art Unit	
	Barbara N Burgess	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 November 2004</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is

    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-4,6-17 and 19-39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4, 6-17, 19-39* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *9-24-04, 7-30-04,*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to amendments filed November 2, 2004. Claims 1-4,

6-17, and 19-30 are presented for further examination.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 6-9, 14-16, 20-22, 24-25, 27-30 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Martin in view of Haddock et al. (hereinafter "Haddock",

6,104,700).

As per claims 1, 20, 21, 29, and 30, Martin discloses a method of selectively

establishing a quality of service value for a particular network device in a network that

comprises a plurality of other heterogeneous network devices, comprising the steps of:

*   Receiving application information that defines one or more traffic flows associated

    with one or more message types generated by an application program, including

    information identifying one or more points at which an application generates the

    traffic flows (column 2, lines 25-28, 44-47, column 3, lines 2-4, 9-15, 34-39, 48-49,

    55-59, column 4, lines 1-5, 13-15, 33-38, 52-55, column 5, lines 1-3, column 9, lines

    65-67, column 10, lines 1-2);

- Receiving device information that defines one of mare quality of service treatments that the network device may apply to data processed by the network device (column 2, lines 7-13, column 7, lines 19-21, 27-30);

- Based on the device information and the application information, determining one or more processing policies that associate the traffic flows with the quality of service treatments (column 2, lines 17-20, column 3, lines 32-45, 65-67, column 4, lines 1, 29-32, 55-60, column 7, lines 55-59, column 8, lines 54-57, column 9, lines 65-67, column 10, lines 1-2);

- Creating and storing one or more mappings of the application points to the quality of service treatments that may be used to with the processing policies to generate the quality of service value when the application program generates traffic flows of one of the message types (column 3, lines 55-56, column 4, lines 20-25, 64-67, column 5, lines 5-7, column 8, lines 38-40, 47-50, column 10, lines 3-5, 34-35, 40-46, column 13, lines 50-53);

- Causing generation of the quality of service value, wherein the generation of the quality of service value is based on said one or more mappings and is performed before transmitting said traffic flows of one of the message types to said network (column 3, lines 55-59, 65-67, column 4, lines 1-5, 29-32, 60-63, column 5, lines 5-12, column 8, lines 31-58, column 9, lines 20-23, 29-33. 41-44);

- Enforcing one of the processing policies at the network device in response to receiving traffic from the application program that matches the traffic flow type (column 10, lines 3-6, column 11, lines 23-25).

Martin does not explicitly disclose:

- Wherein enforcing one of the processing policies comprises:

- Requesting, using an application quality of service policy element that is tightly coupled to the application program, an operating system function to modify a packet of the traffic flows using a policy element that requests a different operating system function according to the operating system then in use;

- At the network device, in response to receiving traffic from the application program that matches the traffic flow type and in response to the operating system function, modifying the packet to activate a quality of service treatment of the network device.

However, in an analogous art, Haddock discloses modifying the traffic group (packet) based on the terms of the quality of service policy. Based on the modification, the quality of service policy can be activated (column 5, lines 31-67).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate requesting an operating system function to modify a packet and modifying the packet to activate a quality of service treatment of the network device in Martin's system in order for the traffic group to be identified based upon the terms of the quality of service policy defined.

As per claims 2 and 22, Martin discloses:

- Storing the mappings in a repository that is accessible by the application program (column 4, lines 57-60, 64-67, column 5, lines 5-7, column 10, lines 18-24, column 13, lines 42-48);

- Storing both the application information and the device information in the repository (column 7, lines 6-17, column 8, lines 32-38, column 13, lines 35-40); converting the mappings into one or more settings of the network device (column 2, lines 14-20, column 3, lines 44-45, 50-51, column 4, lines 29-31).

As per claims 6, 7, and 24, Martin discloses:

- Creating and storing one or more mappings comprises creating and storing one or more mappings comprises creating and storing one or more policies, concerning network processing of traffic flows generated by the application program, in the repository (column 3, lines 55-56, column 4, lines 20-25, 29-32, 64-67, column 5, lines 5-7).

As per claim 8, Martin discloses:

- Creating and storing one or more mappings comprises creating and storing one or more mappings comprises creating and storing one or more policies, concerning network processing of traffic flows generated by the application program, in a directory (column 3, lines 55-56, column 4, lines 20-25, 29-32, 64-67, column 5, lines 5-7, column 7, lines 6-10).

As per claims 9 and 25, Martin discloses:

- Creating and storing one or more mappings comprises creating and storing one or more policies, concerning network processing of traffic flows generated by the

application program, in a policy server coupled to Lightweight Directory Access

Protocol directory that comprises the repository (column 6, lines 12-14).

As per claims 14, 15,. and 27, Martin discloses determining one or more processing

policies comprises creating and storing one or more policy statements in a repository

(as shown in the rejection of claims 1, 6, and 8) and a policy defines actions to be

applied to a flow and also identifies to whom the actions are to be applied (column 8,

lines 55-57, column 9, lines 49-51). Therefore, Martin implicitly discloses determining

one or more processing policies comprises creating and storing one or more policy

statements in a repository, wherein each policy statement associates a condition of one

of the traffic flows, an operator, an operand, and an action comprising one of the quality

of service treatments.

As per claims 16 and 28, Martin discloses determining one or more processing

policies comprises creating and storing one or more policy statements in a directory (as

shown in the rejections of claims 1, 6, and 8), wherein an entity can define mappings

between one or more flow parameters, entities and quality of service identifiers and

quality of service identifiers and quality of service definitions which contain rules. The

rules or policies defines actions to be applied to a flow and also identifies to whom the

actions are to be applied. These mappings are stored in a directory service (column 4,

lines 56-60, 64-67, column 8, lines 38-40, 47-50, 55-57).

Therefore, Martin implicitly discloses determining one or more processing

policies comprises creating and storing one or more policy statements in a repository,

wherein each statement is represented by a plurality of nodes that represent a condition

of one of the traffic flows, an operator and an action comprising one of the quality of

service treatments, and wherein the plurality of nodes is coupled to a root node having a

distinguished name in the directory.

3.   Claims 3-4, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Martin in view of Haddock et al. (hereinafter "Haddock", 6,104,700) and in further

view of Chapman et al. (hereinafter "Chapman", 6,028,842).

As per claims 3 and 23, Martin, in view of Haddock, does not explicitly disclose

creating and storing one or more classes that classify the traffic flows, each of the

classes comprising one or

more types of traffic flows and based on the traffic flows, determining one or more

processing policies that associate the traffic flows with the quality of service treatments.

However, the use and advantages for classifying traffic flows is well known to one

skilled in the relevant art at the time the invention was made as evidenced my the

teachings of Chapman (column 1, lines 33-34, column 2, lines 1-3, 6-7, 27-28, 40-43,

50-53).

Therefore, one of ordinary skill in the art at the time the invention was made would have

found it obvious to implement or incorporate classifying traffic flows in Martin's method

allowing administrative policies to give, for instance, certain groups different treatment

that other groups.

As per claim 4, Martin does not explicitly disclose receiving application

information comprises receiving one or more application code points that represent

traffic flow types. However, the use and advantages for using application code points to

represent traffic flow types is well known to one skilled in the relevant art at the time the

invention was made as evidenced by Chapman (column 3, lines 46-48, 51-55, 63, 6566,

column 4, lines 3-5, 8-10, 12-14, 19-22, 29-31).

Therefore, one of ordinary skill in the art at the time the invention was made would have

found it obvious to implement or incorporate application code points in Martin's method

order to allocate bandwidth and implement an admission control policy for classes

before delivering a packet.

4.   Claims 10-11, 17, 19, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Martin in view of Haddock et al. (hereinafter "Haddock", 6,104,700)

and in further view of Chapman in further view of Mohaban et al. (hereinafter

"Mohaban", 6,463,470).

As per claims 10-11, 17, 19, and 26, Martin, in view of Haddock and Chapman,

does not explicitly disclose creating and storing one or more mappings further

comprises creating and storing, in the repository, one or more mappings of Application

Code Points of the application program to one or more Differential Services Code Points

of a protocol associated with the network device. However, in an analogous art,

Mohaban discloses the use of RSVP or Differential Services Code Points to request a

particular quality of service for a particular traffic flow (column 4, lines 38-49, column 7,

lines 17-25).

Therefore, one of ordinary skill in the art at the time the invention was made

would have found it obvious to implement or incorporate Differential Services Code

Points and RSVP's in Martin's, in view of Chapman, method allowing the relative

importance of a particular traffic group to be defined.

5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin

in view of Haddock et al. (hereinafter "Haddock", 6,104,700) and in further view of

Schwaller et al. (hereinafter "Schwaller", 6,061,725).

As per claims 12 and 13, Martin, in view of Haddock, does not explicitly disclose

receiving application information comprises receiving application information that

defines one or more traffic flows generated by an application program, including

information identifying one or more points at which an application generates the traffic

flows, from a first and second

individual having responsibility for managing enterprise applications in the network.

However, in an analogous art, Schwaller discloses application testers that simulate a

user reading screens and typing at a keyboard to create network traffic (column 2, lines

49-58).

Therefore, one of ordinary skill in the art at the time the invention was made

would have found it obvious to implement or incorporate a first and second individual

having responsibility for managing enterprise applications in the network in Martin's

method allowing for testing of the application and creating network traffic.

Response to Arguments

The Office notes the following argument:

(a)   Haddock does not modify the packet. Haddock does not mention or contemplate

the modification of packets.

6.   Applicant's argument filed has been fully considered but is not persuasive.

In response to:

(a)   Haddock explicitly discloses, "The packet is added to the rear of the appropriate

Quality of Service queue for the identified traffic group. Importantly, if a maximum delay

has been assigned to the traffic group with which the packet is associated, then the

packet should either be dropped or transmitted within the period specified... Given the

minimum bandwidth of the Quality of Service queue and the maximum delay the traffic

group can withstand, a maximum depth for the Quality of Service queue can be

calculated. If the Quality of Service queue length remains less than or equal to the

maximum length, then the packet is added to the Quality of Service queue. However, if

the Quality of Service queue length would exceed the maximum length by the addition,

then the packet is dropped." There is no limitation on how the packets are modified or

whether all packets are modified in the same manner. Therefore, Haddock's teaching

of dropping and discarding packet to meet a Quality of Service requirement meets the

scope of the claimed limitation "modifying the packet to activate a quality of service treatment".

Conclusion

2.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara N Burgess whose telephone number is (571) 272-3996. The examiner can normally be reached on M-F (8:00am-4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

<div style="text-align:right">Barbara N Burgess
Examiner
Art Unit 2157</div>

January 6, 2005

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
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